SEQUENCE LISTING

<110> GUEGLER, Karl et al

<120> ISOLATED HUMAN TRANSPORTER PROTEINS,
   NUCLEIC ACID MOLECULES ENCODING HUMAN TRANSPORTER PROTEINS,
   AND USES THEREOF

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<141> 2001-02-06

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Ser Tyr Ala Met Ala Asn Thr Gly Ile Val Leu Phe Val Ile Met Leu
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Thr Ala Lys Glu Gly Gly Ser Leu Ile Tyr Glu Lys Leu Gly Glu Lys
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Tyr Thr His Arg Asp Pro Glu Gly Leu Asp Glu Lys Pro Ala Ala Gly
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Pro Leu His Gly Ser Gly Val Glu Tyr Glu Ala His Ser Gly Asp Lys
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13

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Phe Tyr Leu Lys Leu Val Lys Lys Glu Pro Leu Arg Ser Pro Gln Lys
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Ile Gly Ala Leu Val Phe Leu Val Thr Gly Ile Ile Phe Met Met Gly
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Gln Asn Phe Leu Leu Glu Ser Asn Leu Gly Lys Lys Lys Tyr Glu Thr
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Glu Phe His Pro Gly Thr Thr Ser Phe Gly Met Ser Val Phe Asn Leu
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Ser Asn Ala Ile Val Gly Ser Gly Ile Leu Gly Leu Ser Tyr Ala Met
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14

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cacttatttc atttaaataa aattataatg atgtatgttg tgttctgttt gcagaacaga       600
g                                                                       601


<210> 8
<211> 601
<212> DNA
<213> Homo sapien

<400> 8
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gaagactgct gccatgtttt aagatttctt tttttttcca tagtgactag taaaacctgc       180
cattttcatt atacataggc actctataaa tatctgctaa tttagcaatt attagtaatt       240
tcctttcttc tcttccattt cttcctttct tgtattgggt aaaggaacat tcaggattt       300
kcttatgtaa agttttcagg agtttctttc cttcctccct tttacagaga gcatacaaaa       360
tgtagatgat tcatattcac ttatttcatt taaataaaat tataatgatg tatgttgtgt       420
tctgtttgca gaacagagtg ttctgaacat caacacaaag tggaagaacc ttaagctgaa       480
ggtacagtat attatttaca ctgaaggggc ttgtgtgtgg acaagaaagc gctgacagct       540
caaatggatc ccatggaact gagaaatgtc aacatcgaac cagatgatga gagcagcagt       600
g                                                                       601


<210> 9
<211> 601
<212> DNA
<213> Homo sapien

<400> 9
gtttcgtgtg ctgtttctat ctacatctca tactgttttc tattctcaaa aagtaaccct        60
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gtacagatct cctacaataa ttattttcta ttttatttct aaggtttatt tatttatttta       180
ttgagacaga cagagtttca ctcttgtggc ccatgctgga gtgcaatggt gcaatctcgg       240
ctcactgcaa cctctgcctc ccaggttcaa gcgattctcc tgcttcagcc tcctgagtag       300
ytgggattac aggcgcctgc caccacactc ggctaacttt ttgtatttct agtagagacg       360
aagtttcacc atgttggcca ggctggtctt gaactcctga cctcaagtta tccacccacc       420
tcagcctccc aaagtgctgg gattacaggc gtgagccact gtgcctggcc tctaggatta       480
tattaataga acaatcttca attattttat ctttctttat ctttcttttc atgtaggaaa       540
tgtcctaaaa ttttcaaacc ctcaatttga aagcactttt aaaatcatac atagtcgagc       600
a                                                                       601


<210> 10
<211> 601
<212> DNA
<213> Homo sapien

<400> 10
cagcctcctg agtagctggg attacaggcg cctgccacca cactcggcta acttttttgta        60
tttctagtag agacgaagtt tcaccatgtt ggccaggctg gtcttgaact cctgacctca       120
agttatccac ccacctcagc ctcccaaagt gctgggatta caggcgtgag ccactgtgcc       180
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tggcctctag gattatatta atagaacaat cttcaattat tttatctttc tttatctttc        240
tttttcatgta ggaaatgtcc taaaattttc aaaccctcaa tttgaaagca cttttaaaat       300
yatacatagt cgagcatttt atataaaaac aactaaaaag tctgtgacat tttgcagtat         360
aaaaatgcaa tggcagcagc aggccttatt aattgagcct cttggaaatg tggctggtcc         420
taggtccgta gcctcaaagg ccctggcttg taactgcagg agctgaccag cacagctcta         480
taaccaagtt gtacatcttc tagcctgtgt ccaagaaaac cagaatcaca acgctctgtg         540
gatagtgaca tcttaaagtt ttctttccct cccaactctt ttgccagttc attgaattgc         600
t                                                                        601


<210> 11
<211> 601
<212> DNA
<213> Homo sapien


<400> 11
gcaacattta tatcacaaat atgtgctgtt tatgttctga atatcacata tgattagtaa        60
tcacacagct atttgagggc taagcatcag gactataaat atttgtattg tgttagtgct        120
ttgattgaac tcttttatgt ataatattct tcagctgaat gggtttttat atcaactta        180
cttttatata agccatgttt tgaaataaac taggatttta ataatctgaa ttttaatagc        240
tatgtatgta gtcatatatt tgtatgcttt tgtaatgtgc ttacctctaa gacaaaaaaa        300
sctgcctttc cttattaatt atacatacca ttaaaatgaa ttaggaagtt acagatcact        360
gatgaataga aataggaaaa acttccccca atcccacagt catagatcat cttcatgaga        420
gaagaatgtt ccactttta aaatgagggc ctcatttttag gcttataaac acttagcaga       480
tgaatttggt cagaacaatt aaatcactaa acatcatggg gtgtgttttg tgtgtctaag        540
tagcccagac tggattaagc tttctctctt aatttatagc aagtgacaca gtattttaaa        600
g                                                                        601


<210> 12
<211> 601
<212> DNA
<213> Homo sapien


<400> 12
ataagagtgc aacatagcta caggggttat aaaatttata attcatggtc caaatgtaca        60
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attttttaaa aataaacaaa gataaagatt tttttctga attccaggta aaaggcagca        180
ttgctcctcc atttattacg tagatgcttc tatcaacatt cttatttttg tgctccaaat        240
cttggatttg gaaaaatacc aatccgtata aacataaaga aaccatacat gcatgtgggg        300
rtcctaacac cagaaatgac tctgaatgca aaaaaaaaa aaaaaaaaa agggaatttt         360
cgtgccccat ccttagcttt ctctgctttc tctattatat atgcaactgc ctgcccctct        420
atcttacaaa gtacttcgta atctaatgca caggatcagc agtaatgcag ctcagactgc        480
atgctttcgc ctttggattc ctagatttca gattaaggtt tagtcaggct attgaatagc        540
ccttcaattc taagtgctga tgtgaatatc atgcaaatat gatgtacata ttcccatgtg        600
c                                                                        601


<210> 13
<211> 601
<212> DNA
<213> Homo sapien


<400> 13
ctacaggggt tataaaattt ataattcatg gtccaaatgt acatttgtag tattgatttc        60
attgggaatt accaagggat tagatcaatt gtgggggaag tgtatttttt aaaaataaac        120
aaagataaag attttttttc tgaattccag gtaaaaggca gcattgctcc tccatttatt        180
acgtagatgc ttctatcaac attcttattt ttgtgctcca atcttggat ttggaaaaat         240
accaatccgt ataaacataa agaaaccata catgcatgtg gggatcctaa caccagaaat        300
ractctgaat gcaaaaaaaa aaaaaaaaaa aaaagggaat tttcgtgccc catccttagc        360
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17

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tttctctgct ttctctatta tatatgcaac tgcctgcccc tctatcttac aaagtacttc      470
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ttcctagatt tcagattaag gtttagtcag gctattgaat agcccttcaa ttctaagtgc      540
tgatgtgaat atcatgcaaa tatgatgtac atattcccat gtgctgagta agtagatgta      600
g                                                                      601


<210> 14
<211> 601
<212> DNA
<213> Homo sapien


<400> 14
aaatgtacat ttgtagtatt gatttcattg ggaattacca agggattaga tcaattgtgg       60
gaaaagtgta ttttttaaaa ataaacaaag ataaagattt ttttttctgaa ttccaggtaa      120
aaggcagcat tgctcctcca tttattacgt agatgcttct atcaacattc ttattttttgt      180
gctccaaatc ttggatttgg aaaaatacca atccgtataa acataaagaa accatacatg      240
catgtgggga tcctaacacc agaaatgact ctgaatgcaa aaaaaaaaaa aaaaaaaaaa      300
rggaatttttc gtgccccatc cttagctttc tctgctttct ctattatata tgcaactgcc      360
tgccctcta tcttacaaag tacttcgtaa tctaatgcac aggatcagca gtaatgcagc      420
tcagactgca tgctttcgcc tttggattcc tagatttcag attaaggttt agtcaggcta      480
ttgaatagcc cttcaattct aagtgctgat gtgaatatca tgcaaatatg atgtacatat      540
tcccatgtgc tgagtaagta gatgtagcat ttgctaatgt tgctatacat ttagcatcta      600
a                                                                      601


<210> 15
<211> 601
<212> DNA
<213> Homo sapien


<400> 15
taccaatccg tataaacata aagaaaccat acatgcatgt ggggatccta acaccagaaa       60
tgactctgaa tgcaaaaaaa aaaaaaaaaa aaaagggaa ttttcgtgcc ccatccttag      120
ctttctctgc tttctctatt atatatgcaa ctgcctgccc ctctatctta caaagtactt      180
cgtaatctaa tgcacaggat cagcagtaat gcagctcaga ctgcatgctt tcgcctttgg      240
attcctagat ttcagattaa ggtttagtca ggctattgaa tagcccttca attctaagtg      300
ytgatgtgaa tatcatgcaa atatgatgta catattccca tgtgctgagt aagtagatgt      360
agcatttgct aatgttgcta tacatttagc atctaagtta tgaaccagat ctaccactg      420
ggtaacatta aaaaaaagtt agggacttca ggtatgtaaa atatagcaaa ttctatttct      480
acgactttaa agggtatgtg tagagttctg aaaagaattt ctcagcctcc cccaaatcca      540
catactttttg gaaagctgat gattgaaaag attaatgtga tcctttattg taacatctaa      600
c                                                                      601


<210> 16
<211> 601
<212> DNA
<213> Homo sapien


<400> 16
accattgatt cttgtttgga gaacattttg atatattgct tattggtttt tgaggttgca       60
tcttttgggc ttataatttc tatatgatgt ttatttacat gtttgagact ccagcatgga      120
attatatgac aaaaatattt tagtcattaa aacaatctct ttaacaaggc tatttttatct      180
ttgattgtag ggtctttgat ttatgaaaaa ttaggagaaa aggcatttgg atggccggga      240
aaaattggag cttttgtttc cattacaatg cagaacattg gaggtaaggg gatatacttt      300
ycaatggatc ccataaactt tctatagcgt gttcaataaa taagaaaact tatggcaata      360
aacaggcact ttagatacag aaaaattgct acttatagtt cttaaatttt aaaatgatag      420
tttcttaaat aggtttgtgt cctgctttaa ttaaaaacag caatatctaa gaatgaaata      480
acatataaaa ccctgccaat tgaattctag aattaaaata taaaataaaa gctttcttga      540
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18

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ttttttaatgt tattatagca tgaattatta ctcttaaaaa ttgaagaatt tgtgcttata      600
t                                                                        601


<210> 17
<211> 601
<212> DNA
<213> Homo sapien


<400> 17
tttagataca gaaaaattgc tacttatagt tcttaaattt taaaatgata gtttcttaaa       60
tagtttttgtg tcctgcttta attaaaaaca gcaatatcta agaatgaaat aacatataaa      120
acctgcaaa ttgaattcta gaattaaaat ataaaataaa agctttcttg attttaatg        180
ttattatagc atgaattatt actcttaaaa attgaagaat ttgtgcttat atctgtcatt      240
gacaaaacag ttgacgtttt ctatgtgtga ctgagttcga tttactaaac tgaaaagtgg      300
ktgtctgtgg gaacatagcc aaatgctgtg gtccttgaaa cgcagcctgc actgagccag      360
cccactaaac agtgtctctg gaagtttact aaggcaaaag tctggctagg catcaaatgc      420
actataaacc cggtttgtt gattctatgg attcttataa ttcccactga attatcattt       480
ccagtgtagg acctagaaat atatatatat atttttaaca atgttctctc gttggtgtgt      540
ttgcccacca gcttcatact gtttctgttg tgtctttggc cctcagaagg catccaaacc      600
c                                                                        601


<210> 18
<211> 601
<212> DNA
<213> Homo sapien


<220>
<221> variation
<222> (301)...(301)
<223> T may or may not be present


<400> 18
gactattgca gtagtcttct aactggtctt cctggcttga gtttcccctg ctctcagata       60
aactctaatt tgttctccag ataaactttc tcaaatttga gtctgtttct acttttgtcg      120
tgcataaaat tcttcagcat gcctttatta ttttcaagga aaaacttaaa ctcattggac      180
tgacacaaga tcttcgtcta gttcttctgc tcaatctttc taaactttcc tagcaatgcc      240
catatctatc tatctttatc tatctatcta tctatctatc tatctatcta tctatctatc      300
tatcatctat caatttatcc atcatctata ccctacatgt cctgtgtcaa accataacaa      360
attatattta ttccctaac agtactattt taatattttt aaaaatcatc catgccttct       420
tttcacaggc tactttctcc ccttgactgt ctctcaaagt cctccaaccc taacacacac      480
gcacacacac acacacacac acacacacac acacacacat tttctctctc actctgctca      540
cctggtctat tgctcctcta gactggtaaa tactagttcc tctgggctct catggtcctg      600
t                                                                        601


<210> 19
<211> 601
<212> DNA
<213> Homo sapien


<220>
<221> variation
<222> (301)...(301)
<223> A may or may not be present


<400> 19
attgcagtag tcttctaact ggtcttcctg gcttgagttt cccctgctct cagataaact       60
ctaatttgtt ctccagataa actttctcaa atttgagtct gtttctactt ttgtcgtgca      120
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taaaattctt cagcatgcct ttattatttt caaggaaaaa cttaaactca ttggactgac     180
acaagatctt cgtctagttc ttctgctcaa tctttctaaa ctttcctagc aatgcccata     240
tctatctatc tttatctatc tatctatcta tctatctatc tatctatcta tctatctatc     300
atctatcaat ttatccatca tctataccct acatgtcctg tgtcaaacca taacaaatta     360
tatttattcc cctaacagta ctattttaat attttttaaa atcatccatg ccttctttttc    420
acaggctact ttctcccctt gactgtctct caaagtcctc caaccctaac acacacgcac     480
acacacacac acacacacac acacacacac acacattttc tctctcactc tgctcacctg     540
gtctattgct cctctagact ggtaaatact agttcctctg ggctctcatg gtcctgtttg     600
t                                                                     601


<210> 20
<211> 601
<212> DNA
<213> Homo sapien

<220>
<221> variation
<222> (301)...(301)
<223> T may or may not be present

<400> 20
gcagtagtct tctaactggt cttcctggct tgagtttccc ctgctctcag ataaactcta      60
atttgttctc cagataaact ttctcaaatt tgagtctgtt tctacttttg tcgtgcataa     120
aattcttcag catgccttta ttattttcaa ggaaaaactt aaactcattg gactgacaca     180
agatcttcgt ctagttcttc tgctcaatct ttctaaactt cctagcaat gcccatatct     240
atctatcttt atctatctat ctatctatct atctatctat ctatctatct atctatcatc     300
tatcaattta tccatcatct ataccctaca tgtcctgtgt caaaccataa caaattatat     360
ttattcccct aacagtacta ttttaatatt tttaaaaatc atccatgcct tcttttcaca     420
ggctactttc tccccttgac tgtctctcaa agtcctccaa ccctaacaca cacgcacaca     480
cacacacaca cacacacaca cacacacaca cattttctct ctcactctgc tcacctggtc     540
tattgctcct ctagactggt aaatactagt tcctctgggc tctcatggtc ctgtttgtat     600
c                                                                     601


<210> 21
<211> 601
<212> DNA
<213> Homo sapien

<220>
<221> variation
<222> (301)...(301)
<223> C may or may not be present

<400> 21
ctgacacaag atcttcgtct agttcttctg ctcaatcttt ctaaactttc ctagcaatgc      60
ccatatctat ctatctttat ctatctatct atctatctat ctatctatct atctatctat     120
ctatcatcta tcaatttatc catcatctat accctacatg tcctgtgtca aaccataaca     180
aattatattt attcccctaa cagtactatt ttaatatttt taaaaatcat ccatgccttc     240
ttttcacagg ctactttctc cccttgactg tctctcaaag tcctccaacc taacacaca     300
cgcacacaca cacacacaca cacacacaca cacacacaca ttttctctct cactctgctc     360
acctggtcta ttgctcctct agactggtaa atactagttc ctctgggctc tcatggtcct     420
gtttgtatct agtatgttac tgttttctaa aggatatttt aaaacacttg agtagagaat     480
aagctttttgg agtctgatgg acctgaattt gagtctgttt ctgtcactat ctgtgaactt     540
gggaagatca ctgtactcct ttgtctgatt ttttcatgta taaaaattac cttacaaagg     600
c                                                                     601

<210> 22
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<210> 601
<212> DNA
<213> Homo sapien

<400> 22
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acacaagatc ttcgtctagt tcttctgctc aatctttcta aactttccta gcaatgccca      60
tatctatcta tctttatcta tctatctatc tatctatcta tctatctatc tatctatcta     120
tcatctatca atttatccat catctatacc ctacatgtcc tgtgtcaaac cataacaaat     180
tatatttatt cccctaacag tactatttta atatttttaa aaatcatcca tgccttcttt     240
tcacaggcta ctttctcccc ttgactgtct ctcaaagtcc tccaacccta acacacacgc     300
rcacacacac acacacacac acacacacac acacacattt tctctctcac tctgctcacc     360
tggtctattg ctcctctaga ctggtaaata ctagttcctc tgggctctca tggtcctgtt     420
tgtatctagt atgttactgt tttctaaagg atatttaaa acacttgagt agagaataag     480
cttttggagt ctgatggacc tgaatttgag tctgtttctg tcactatctg tgaacttggg     540
aagatcactg tactcctttg tctgattttt tcatgtataa aaattacctt acaaaggcta     600
t                                                                     601
```

<210> 23
<211> 601
<212> DNA
<213> Homo sapien

<400> 23
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actgtctctc aaagtcctcc aaccctaaca cacacgcaca cacacacaca cacacacaca      60
cacacacaca cacattttct ctctcactct gctcacctgg tctattgctc ctctagactg     120
gtaaatacta gttcctctgg gctctcatgg tcctgtttgt atatagtatg ttactgtttt     180
ctaaaggata ttttaaaaca cttgagtaga gaataagctt ttggagtctg atggacctga     240
atttgagtct gtttctgtca ctatctgtga acttgggaag atcactgtac tcctttgtct     300
rattttttca tgtataaaaa ttaccttaca aaggctattg tgaggatgaa ataaggtaac     360
atatggcaca taataagtgt tctgtatatg cttctctcct ccctggttct ctgcttccat     420
atccatgtct ctggagttgc ctgaattatt ttttaaatag gcatttaaaa aattataaaa     480
caaatatatg atgattgtga aaaactaaaa cactgcataa atatataaat taccaagaaa     540
agtttatgtc agtcatcctc agaaataact actcataggt tttcccctat gcctaattca     600
a                                                                     601
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<210> 24
<211> 601
<212> DNA
<213> Homo sapien

<400> 24
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tatcgagcat ttcataggat tgccttatag ttggtctaat ttaacaactg aaataaccag      60
gcataagcat aattaaccct ggactcaaga agttgagtgg cagcacctca gctgtggttc     120
aaagcatagc cactactacg cttctaaaca atggaataaa gtataaagcg gtctctcagt     180
caagcctcac acaggtaaga ggcgtgactt taagggagta agatgaaata tcgtaacatc     240
accccagaaa taatgctctc actttggtta ctttatttga ttagttgata tttggcataa     300
sagaaatcac ttgtatttct ctatttaaca actctacatt tagaacactt aatttttctca     360
atcccctaaa aaattaacat ttactgcaga tgttttcaca ttaacagatt aatgtctgga     420
tcattctgaa ttttttgaaga ccaaacatgt taacatcact gacatcactg aaaaccagca     480
attaatagct gtaacattga atggtacctc accaagccag ctaatcagaa atatctcctg     540
tgttcacact ctgtaagatt tagctttagc caaggtcttt gcaaagatta accaaataat     600
g                                                                     601
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<210> 25
<211> 601
<212> DNA
<213> Homo sapien

<220>
<221> variation
<222> (301)...(301)
<223> G may or may not be present

<400> 25
tgagttctat ttttaactga atcttttggc catgtgtcaa caaattaacg ttatccttca   60
ccaaatgggt gggcttgaaa aaggcgtgat gcataaatat ttacagttgt aggcaaaatt   120
gtaatgttat gtatatgaat acatattcat tttttcaggg agaaggcttg tagatttcat   180
caagaaatct ttcacaagag tagataatca ttcatgtatc acttacctag atgctcatga   240
aattttgcca ctttatataa ttccttagtt agccaaaagg agagtaagat gaagaggggg   300
gaaaaaaaaa acttctttga caaagatgga gagaagctgt catctcttgt attcttttat   360
caatccagga agcctttggt tttgacaata agtggtctga gactttgtgt actcctcaga   420
taggtcccgg aggactagat tggtgcccat ctgcagaaaa ccagagggga tatattgact   480
ctgcagatct gccctttgat tctgccatct ctcagctggc ccatgccttt tgttgccaga   540
ctactgccca agttatagac actaacacag gcacactgag tatgggctat gttgatttat   600
a   601

<210> 26
<211> 601
<212> DNA
<213> Homo sapien

<220>
<221> variation
<222> (301)...(301)
<223> A may or may not be present

<400> 26
tctattttta actgaatctt ttggccatgt gtcaacaaat taacgttatc cttcaccaaa   60
tgggtgggct tgaaaaaggc gtgatgcata atatttaca gttgtaggca aaattgtaat   120
gttatgtata tgaatacata ttcatttttt cagggagaag gcttgtagat ttcatcaaga   180
aatctttcac aagagtagat aatcattcat gtatcactta cctagatgct catgaaattt   240
tgccacttta tataattcct tagttagcca aaaggagagt aagatgaaga ggggggaaaa   300
aaaaaacttc tttgacaaag atggagagaa gctgtcatct cttgtattct tttatcaatc   360
caggaagcct ttggttttga caataagtgg tctgagactt tgtgtactcc tcagataggt   420
cccggaggac tagattggtg cccatctgca gaaaaccaga ggggatatat tgactctgca   480
gatctgccct ttgattctgc catctctcag ctggcccatg ccttttgttg ccagactact   540
gcccaagtta tagacactaa cacaggcaca ctgagtatgg gctatgttga tttataacta   600
a   601

<210> 27
<211> 601
<212> DNA
<213> Homo sapien

<400> 27
aggcgtgatg cataaatatt tacagttgta ggcaaaattg taatgttatg tatatgaata   60
catattcatt ttttcaggga gaaggcttgt agatttcatc aagaaatctt tcacaagagt   120
agataatcat tcatgtatca cttacctaga tgctcatgaa attttgccac tttatataat   180
tccttagtta gccaaaagga gagtaagatg aagagggggg aaaaaaaaaa cttctttgac   240
aaagatggag agaagctgtc atctcttgta ttctttatc aatccaggaa gcctttggtt   300
ytgacaataa gtggtctgag actttgtgta ctcctcagat aggtcccgga ggactagatt   360
ggtgcccatc tgcagaaaac cagaggggat atattgactc tgcagatctg ccctttgatt   420
ctgccatctc tcagctggcc catgcctttt gttgccagac tactgcccaa gttatagaca   480
ctaacacagg cacactgagt atgggctatg ttgatttata actaatgagg gcagaacctt   540

agaactgcag cttcactgta aactttggag caggatttaa cacagaatca gccctgatac   600
t   601

<210> 28
<211> 601
<212> DNA
<213> Homo sapien

<400> 28
agaacttgga agcagtgcca aatacacaat gacttttttt tccatttggg ggattagatg   60
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ccattaagct gtcacatttt ccattttagc aatgtcaagc tacctcttta tcattaaata   180
tgaactacct gaagtaatca gagcattcat gggacttgaa gaaaatactg ggtatgtctt   240
atgctccctc tgtgacatca agtgactcat tctacttggt cttttctgat tctaatatcc   300
ytgtctctca cttctagaga atggtacctc aatggcaact acctcatcat atttgtgtct   360
gttggaatta ttcttccact ttcgctcctt aaaaatttag gtaaagatat tttctaactg   420
gaaatatttt tattttttatt tcacatttaa ataggttagc taattgtaga tgccatattc   480
accttccaaa atgcttcttc taacttctag gttatcttgg ctataccagt ggattttctc   540
ttacctgcat ggtgtttttt gttagtgtgg taagtgatgt gatgacatga tccttgcagg   600
t   601

<210> 29
<211> 601
<212> DNA
<213> Homo sapien

<400> 29
gttggttagc atgagttttt ttgtgcctaa attagtgtcc tcattttgtt caagcacttc   60
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aaaagagcag ctacgattta aagatagttg aggtagaata tcaaagctac tactaatggt   180
ttggtctagg cacactggtt atatatgggg aaaaaaggaa aacttcaagc aggaacatga   240
caataatctg gcatttagaa cagcagagga gagtcccaga tgagaaacaa gaaggctata   300
yccatattca catgaatcag ccattctctc ttacacattc cacccattaa gagaggacaa   360
gaacagtggg attaaagaag aaatcctcct ctctaggccc ctgacaaaag agggaatttc   420
ttgcactatc atgaatgcca aaatttataa agcatttccc caaagaggta aaggagaagg   480
aaaaaaagtt ttgaagaccc atgtcacctt agtttgaaga aataaggaaa tgatcatctt   540
tctcatggaa gggcatgaaa gagggtggga aggattcttg caaaatattg tcctgttaac   600
t   601

<210> 30
<211> 601
<212> DNA
<213> Homo sapien

<400> 30
cattttagca ttctaatttg ctttgaaatt ctgctcatat gttcaaagat tctttaacag   60
gaaacacagt ttatagcttc ctcttcagag aaaatatgta ctccatccac tcctcagtaa   120
catgctttaa tcagaaaggt gggaatcagc ccaccacagc actaccttat cttctttctc   180
tcctttctct ccaccataat ggttcagggg aggggttcat ggcaggtgga caaggagtcg   240
atggttgtaa taattttggc aggtgttggg aatttaaatt tgaattttgt tcggaagaaa   300
ygatgtcagc tggactagaa atgaaaacac ccatgacgac caaaacttat ggttaggggc   360
agcctcgata agccagtgat gtcatttata gtcagcacct aacccttgtc tagaacacat   420
tcattacaag agatgtgtca atatctgtcc tttgttgtct tatttgtaca atagagtcac   480
tggctagaaa atcttgtttc ttccagctga tggtctatgg ttcatttgta ttcttttccc   540
tttgaagttg ttgatatttg cttgggaaca aaggatatga actcattata gctgttttcc   600
t   601

<210> 31
<211> 601
<212> DNA
<213> Homo sapien

<400> 31
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atgtcattta tagtcagcac ctaacccttg tctagaacac attcattaca agagatgtgt   120
caatatctgt cctttgttgt cttatttgta caatagagtc actggctaga aaatcttgtt   180
tcttccagct gatggtctat ggttcatttg tattcttttc cctttgaagt tgttgatatt   240
tgcttgggaa caaaggatat gaactcatta tagctgtttt cctctttcct ttaagggagg   300
rtattatata ataattctca acttctttaa tctagacatc agtaacctca gtcttcattc   360
tcactaaata gcaaaacttt ccccataaat tctgatttac ctcataaaaa atttcagaac   420
actttcaagt attttgatgt ctttgattta ctttgaaaat tacatgtagc agttactcca   480
gaagcctgac aattgatctt tggcagccag gttccttcta gaatggtttt cagaagcttt   540
tcaggtagtc tggactcctg gcagtagtac tttgctgact ctactaggtt cttttcctca   600
t   601

<210> 32
<211> 601
<212> DNA
<213> Homo sapien

<400> 32
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agaaaatctt gtttcttcca gctgatggtc tatggttcat ttgtattctt ttccctttga   120
agttgttgat atttgcttgg gaacaaagga tatgaactca ttatagctgt tttcctcttt   180
cctttaaggg aggatattat ataataattc tcaacttctt taatctagac atcagtaacc   240
tcagtcttca ttctcactaa atagcaaaac tttccccata aattctgatt tacctcataa   300
raaatttcag aacactttca gtattttga tgtctttgat ttactttgaa aattacatgt   360
agcagttact ccagaagcct gacaattgat ctttggcagc caggttcctt ctagaatggt   420
tttcagaagc ttttcaggta gtctggactc ctggcagtag tactttgctg actctactag   480
gttcttttcc tcatttaaag tcatctcatt atgaaatgca aaagctttct atgttaggag   540
cctgtttcat ctttatgtta attatattct tattcagtgg gcaagcttac tgacctacgt   600
g   601

<210> 33
<211> 601
<212> DNA
<213> Homo sapien

<400> 33
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cactaaatag caaaactttc cccataaatt ctgatttacc tcataaaaaa tttcagaaca   120
ctttcaagta ttttgatgtc tttgatttac tttgaaaatt acatgtagca gttactccag   180
aagcctgaca attgatcttt ggcagccagg ttccttctag aatggttttc agaagctttt   240
caggtagtct ggactcctgg cagtagtact ttgctgactc tactaggttc ttttcctcat   300
ytaaagtcat ctcattatga aatgcaaaag ctttctatgt taggagcctg tttcatcttt   360
atgttaatta tattcttatt cagtgggcaa gcttactgac tacgtgaaa tagactgttc   420
ctcttctagg gaaatgattg tttttaagac tgaaggacta gtgtttaaga aaaatggaaa   480
tgaatcctca ttagctctct aagacaaatt taaatcagct ataagtttat gtactaaata   540
tgtcttcatg attagcaata tagatatact tttttattat tattttcatt ttgaaaagtg   600
a   601

<210> 34
<211> 601
<212> DNA

<213> Homo sapien

<400> 34
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cagaacactt tcaagtattt tgatgtcttt gatttacttt gaaaattaca tgtagcagtt     120
actccagaag cctgacaatt gatctttggc agccaggttc cttctagaat ggttttcaga     180
agcttttcag gtagtctgga ctcctggcag tagtactttg ctgactctac taggttcttt     240
tcctcattta aagtcatctc attatgaaat gcaaaagctt tctatgttag gagcctgttt     300
satctttatg ttaattatat tcttattcag tgggcaagct tactgaccta cgtgaaatag     360
actgttcctc ttctagggaa atgattgttt ttaagactga aggactagtg tttaagaaaa     420
atggaaatga atcctcatta gctctctaag acaaatttaa atcagctata agtttatgta     480
ctaaatatgt cttcatgatt agcaatatag atatactttt ttattattat tttcattttg     540
aaaagtgatt ttttttgta agtttaaaaa acaaagcttg gtgttctttc tttttccagt     600
c                                                                      601
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<210> 35
<211> 601
<212> DNA
<213> Homo sapien

<400> 35
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cttttcctca tttaaagtca tctcattatg aaatgcaaaa gctttctatg ttaggagcct     120
gtttcatctt tatgttaatt atattcttat tcagtgggca agcttactga cctacgtgaa     180
atagactgtt cctcttctag ggaaatgatt gttttttaaga ctgaaggact agtgtttaag     240
aaaaatggaa atgaatcctc attagctctc taagacaaat ttaaatcago tataagttta     300
ygtactaaat atgtcttcat gattagcaat atagatatac ttttttatta ttattttcat     360
tttgaaaagt gattttttttt tgtaagttta aaaaacaaag cttggtgttc tttcttttttc     420
cagtcggtcc cggagaaaaa tgcaaacggt gtcaaatatt tccatcacgg ggatgcttgt     480
catgtacctg cttgccgccc tctttggtta cctaaccttc tatggtaggt cactctgaaa     540
gtcattctct atatgcaaat ccttgttagg ctggtccttg acctgggtag gtatgattttt     600
t                                                                      601
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<210> 36
<211> 601
<212> DNA
<213> Homo sapien

<400> 36
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cattatgaaa tgcaaaagct ttctatgtta ggagcctgtt tcatctttat gttaattata     120
ttcttattca gtgggcaagc ttactgacct acgtgaaata gactgttcct cttctaggga     180
aatgattgtt tttaagactg aaggactagt gtttaagaaa aatggaaatg aatcctcatt     240
agctctctaa gacaaattta aatcagctat aagtttatgt actaaatatg tcttcatgat     300
kagcaatata gatatacttt tttattatta ttttcatttt gaaaagtgat ttttttttgt     360
aagtttaaaa aacaaagctt ggtgttcttt cttttttccag tcggtcccgg agaaaaatgc     420
aaacggtgtc aaatatttcc atcacgggga tgcttgtcat gtacctgctt gccgccctct     480
ttggttacct aaccttctat ggtaggtcac tctgaaagtc attctctata tgcaaatcct     540
tgttaggctg gtccttgacc tgggtaggta tgatttttaa aaattgcctt ctataagcat     600
g                                                                      601
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<210> 37
<211> 601
<212> DNA
<213> Homo sapien

<400> 37

25

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aatatactat tttagttttg tcacttgacc tgaggaaatg gggcctgatt cagcctggct     120
aacaagttac aagaatttgt gaattaacac ctattttata aaaaatatcc ctcaaacaaa     180
attattttcc tctagggata gatgatattt ctctggctag actccatagt ccaactcagg     240
ctacaagtga tgagaatgaa tccacttgca tgtgataaag ctcctttgat ggaattatta     300
mctgccacac aaatagcagg gaaactgcca ggtcctcaag tttgaatttg cctcctcttt     360
accagtcaag tcaaatctgg gagcttggga ctttaggtaa aatttctgac atatcccatt     420
ctattttgtt atactaaatg atttcctaag aaagaggaca tgacagaatt ccttcaatc     480
taagaatgca ccaccaaaaa aaagtgacta tggccacatt agattatgcc tgcaacattt     540
cctctctggc atcttaacag ttcacaaagg gagtaggatt gtactccttc catgaagtgt     600
g                                                                     601

<210> 38
<211> 601
<212> DNA
<213> Homo sapien

<400> 38
ctgccacaca aatagcaggg aaactgccag gtcctcaagt ttgaatttgc ctcctcttta      60
ccagtcaagt caaatctggg agcttgggac tttaggtaaa atttctgaca tatcccattc     120
tattttgtta tactaaatga tttcctaaga aagaggacat gacagaattt ccttcaatct     180
aagaatgcac caccaaaaaa aagtgactat ggccacatta gattatgcct gcaacatttc     240
ctctctggca tcttaacagt tcacaaaggg agtaggattg tactccttcc atgaagtgtg     300
rccacataaa cagatttcat ggaatcacat attgacctgg tagcatatgt ttacatgaat     360
cagtgtatca atataaatat attttttgtat aaacctcctt ttaaagtttt taacttaatt     420
tttttcttac tgacttggta aattgaattg catgtatgac aaattgtgga ggaaaagatt     480
caggagtagg ccaccatttg cttaggtttt ttttctattt gactaatatt tgactattaa     540
ccaaacatgt gctttagatt gggcattaac tttttgccgg ttgtgaaata atgaatgacg     600
a                                                                     601

<210> 39
<211> 601
<212> DNA
<213> Homo sapien

<400> 39
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taaacctcct tttaaagttt ttaacttaat ttttttctta ctgacttggt aaattgaatt     120
gcatgtatga caaattgtgg aggaaaagat tcaggagtag gccaccattt gcttaggttt     180
ttttctatt tgactaatat ttgactatta accaaacatg tgctttagat tgggcattaa     240
cttttttgccg gttgtgaaat aatgaatgac gaggtcaata ctactgaagg tattttcact     300
mcttttgtc tgatcttgag gtgaaaatcc aactacgctt gattccatag atattttctt     360
gttatttgtg cttggagtcc tgaatgaagg tgttttcaag tagggctgca tcttcgtctt     420
agagtagtac ccactgggag accatctaaa aattatacta atttatccct gcacgttact     480
tatacttatt ttaatgagtt tcataagaca agcaaaaact tgaaagagcc caaaaatatc     540
tgttttagtg tggtgatgga gtcatagttg ttgagcttga aaaaatggta gcaatcattc     600
a                                                                     601

<210> 40
<211> 601
<212> DNA
<213> Homo sapien

<400> 40
taggtttttt ttctatttga ctaatatttg actattaacc aaacatgtgc tttagattgg      60
gcattaactt tttgccggtt gtgaaataat gaatgacgag gtcaatacta ctgaaggtat     120
tttcactact ttttgtctga tcttgaggtg aaaatccaac tacgcttgat tccatagata     180
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ttttcttgtt atttgtgctt ggagtcctga atgaaggtgt tttcaagtag ggctgcatct    240
ttgtttagga gtagtaccca ctgggagacc atctaaaaat tatactaatt tatccctgca    300
ygttacttat acttatttta atgagtttca taagacaagc aaaaacttga aagagcccaa    360
aaatatctgt tttagtgtgg tgatggagtc atagttgttg agcttgaaaa aatggtagca    420
atcattcatc ctagagttta cacactgggt ttgtaacctg catcaggagt ggctgcacag    480
gtagggacag gggagtggt aggctgggag agacaatatg tggggcttgg gtctctcatc    540
ccctttcaaca agagcacctt ggtctctgtc tgatttgtaa ttgcttctgt acagcggaga    600
t                                                                    601


<210> 41
<211> 601
<212> DNA
<213> Homo sapien

<400> 41
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atcttcgtct tagagtagta cccactggga gaccatctaa aaattatact aatttatccc    120
tgcacgttac ttatacttat tttaatgagt ttcataagac aagcaaaaac ttgaaagagc    180
ccaaaaatat ctgttttagt gtggtgatgg agtcatagtt gttgagcttg aaaaaatggt    240
agcaatcatt catcctagag tttacacact gggtttgtaa cctgcatcag gagtggctgc    300
rcaggtaggg acaggggagg tggtaggctg ggagagacaa tatgtggggc ttgggtctct    360
catcccctc aacaagagca ccttggtctc tgtctgattt gtaattgctt ctgtacagcg    420
gagatagatt tatcacaatg taaatgagct tgagaggctc tttattttgt attatacct    480
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gagctcagag gcaagaccag aggtgcctgg attcccaggc ctaggtcttt tcctctgttc    600
t                                                                    601


<210> 42
<211> 601
<212> DNA
<213> Homo sapien

<400> 42
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ctctttgttc atttgaatga aggttgcata gctaatgagc tcagaggcaa gaccagaggt    120
gcctggattc ccaggcctag gtcttttcct ctgttctgtg ttctctctat aaaatgttgc    180
cataagtgac ctgtgctgat ttgacaacac caagcggttt cattctcttt ttcctgttgt    240
aggagaagtt gaagatgaat tacttcatgc ctacagcaaa gtgtatacat tagacatccc    300
ycttctcatg gttcgcctgg cagtccttgt ggcagtaaca ctaactgtgc ccattgtcct    360
cttcccagta agtacataag actttgatga aagaaaccta cttgacccca taaattagta    420
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ggatattatt ttcctatagc attttgagtc acttaaaatt ggccatttaa tgtgtagata    540
gagcaagtag tttcaggtgg tattttata gtgtaggaaa aaaatcataa aacttatttt    600
t                                                                    601


<210> 43
<211> 601
<212> DNA
<213> Homo sapien

<400> 43
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aggtcacccc tccctggcat ttgtcattgg tgtcagtttg ttctgagatc ccagagcaga    120
gctggtagtg aagatttggg ctgtgtgagt taaaaccacc acctaaggat aaacacaggt    180
cttcaccctc ctgccagctc ctgtttcata aacactgaat ttactcattc atttgagggg    240
gaaaaaaata agtgacacag taaccagcac tgtcctggac ataatgttcc atacagggct    300
kgcatatgaa gactatttct ataatgacac tgtggtcact ttaaatgcag cttgtgtgct    360
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27

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gaaatatatt ttggcacatt cctttttcat gagtgcatga aatcagatcc gtactactat      420
ggtggctaat attttactct taaatcatgt cttgcctcta atatatctga aagtatttca      480
gatgacatac acatagcttt agcctaaaat cagctccgtc ttgggtacaa gacagaagac      540
aactataaac agaaggtata cgatagggta aaattgccag gcaaacaact tcactgagaa      600
a                                                                     601


<210> 44
<211> 601
<212> DNA
<213> Homo sapien

<400> 44
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tgtccttcat tatgtatttc cactcaacat tagcatttat gaaacatttt gcacattatc      180
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agagtcataa gtccctggga cttggtgatg tgcacagtga ctggcacaga gggtgagctc      300
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aactgccttt tctagcaaaa gcatagacac tctttccctt ggtgacatgt gctacgaatt      420
cagctgggtt gaggatctgg gctaaatgaa ccaaacctcc ctatacatga aggatacaca      480
gagatggtga cagagagtgg tcacttccgt gagtggatct caatcaagtc ctctgaagct      540
aaattcaatt ttttttcttt actaaaatga taaaagttgt tattggcgct tttgcttgtt      600
t                                                                     601


<210> 45
<211> 601
<212> DNA
<213> Homo sapien

<400> 45
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gccattagaa ccaaaattga ccataagaac cagagttcag aaaaatgact aactgctgtc      120
cttcattatg tatttccact caacattagc atttatgaaa cattttgcac attatcctgt      180
cctcaccctt gcaatgttac atttatataa tctgtgtaag tgctccactg ccccacagag      240
tcataagtcc ctgggacttg gtgatgtgca cagtgactgg cacagagggt gagctctgtc      300
rtgcttggga agaaaatggt cttcaaatg aatcttgcct tgtcttgaaa tgtataaact      360
gccttttcta gcaaaagcat agacactctt tcccttggtg acatgtgcta cgaattcagc      420
tgggttgagg atctgggcta aatgaaccaa acctccctat acatgaagga tacacagaga      480
tggtgacaga gagtggtcac ttccgtgagt ggatctcaat caagtcctct gaagctaaat      540
tcaatttttt ttctttacta aaatgataaa agttgttatt ggcgcttttg cttgtttatt      600
t                                                                     601


<210> 46
<211> 601
<212> DNA
<213> Homo sapien

<400> 46
caatagtgtg taaacattag atgccattag aaccaaaatt gaccataaga accagagttc       60
agaaaaatga ctaactgctg tccttcatta tgtatttcca ctcaacatta gcatttatga      120
aacattttgc acattatcct gtcctcaccc ttgcaatgtt acatttatat aatctgtgta      180
agtgctccac tgccccacag agtcataagt ccctgggact tggtgatgtg cacagtgact      240
ggcacagagg gtgagctctg tcgtgcttgg gaagaaaaat ggtcttcaaa tgaatcttgc      300
yttgtcttga aatgtataaa ctgccttttc tagcaaaagc atagacactc tttcccttgg      360
tgacatgtgc tacgaattca gctgggttga ggatctgggc taaatgaacc aaacctccct      420
atacatgaag gatacacaga gatggtgaca gagagtggtc acttccgtga gtggatctca      480
atcaagtcct ctgaagctaa attcaatttt ttttctttac taaaatgata aaagttgtta      540
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28

ttggcgcttt tgcttgttta tttcgtataa cttagggctc agattttcaa tgtgtcaaat   600
g   601

<210> 47
<211> 601
<212> DNA
<213> Homo sapien

<400> 47
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tcataagtcc ctgggacttg gtgatgtgca cagtgactgg cacagagggt gagctctgtc   120
gtgcttggga agaaaaatgg tcttcaaatg aatcttgcct tgtcttgaaa tgtataaact   180
gccttttcta gcaaaagcat agacactctt tcccttggtg acatgtgcta cgaattcagc   240
tgggttgagg atctgggcta aatgaaccaa acctccctat acatgaagga tacacagaga   300
wggtgacaga gagtggtcac ttccgtgagt ggatctcaat caagtcctct gaagctaaat   360
tcaatttttt ttctttacta aaatgataaa agttgttatt ggcgcttttg cttgtttatt   420
tcgtataact tagggctcag attttcaatg tgtcaaatgc tgactcacag catggttctc   480
ctgacagttt atttcattta aggaactctt caccagtaag tttatttact tgccttgata   540
tctccacaca ttaataataa aactaacaaa acctaatctg aattaaaatc tatcagcttt   600
a   601

<210> 48
<211> 601
<212> DNA
<213> Homo sapien

<400> 48
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aagtcctctg aagctaaatt caattttttt tctttactaa aatgataaaa gttgttattg   120
gcgcttttgc ttgtttattt cgtataactt agggctcaga ttttcaatgt gtcaaatgct   180
gactcacagc atggttctcc tgacagttta tttcatttaa ggaactcttc accagtaagt   240
ttatttactt gccttgatat ctccacacat taataataaa actaacaaaa cctaatctga   300
rttaaaatct atcagcttta ggcattattt tgtgttctcc ttctttcaac atggtaactg   360
ggctctcttt cttaggagct tgagaagata tgactggggt ttgtttttct ctacttcatt   420
tattatcttt ctttttttcca atcaggttag ttttttcctt tttagtaaaa ggtgcatagt   480
aactgcttgt agtatttgtt gaacaagtga ataaatgaaa tgaattaagg tagtgttttc   540
actagcagcc caacatttct ttctctctta gtagtgggtg gggtatcagt tatggaatgg   600
c   601

<210> 49
<211> 601
<212> DNA
<213> Homo sapien

<400> 49
gaaatgaatt aaggtagtgt tttcactagc agcccaacat ttctttctct cttagtagtg   60
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cttatgcttc cctttatgca gtaaagtttc catatttcca taaagaacaa gaaaccaaat   180
aatcctaatg gatatataat gaacacacag atgaaaattt cacctgccat gcctttgaaa   240
aaagatccct agctacttgt atttcatctt ataattaaaa tcagtctttt cacttatgtt   300
ktcttcagat ctcctgtttt gaagtgtata tagatatcaa catagaaatg cagcgtatat   360
tgctatcaac tgcagtggag cagtgattcg taggttttcc aacatccttg ccttaagcaa   420
acctgcaaaa tcaaagtgtg agctacgtct aaacaatggg agaggctttt tttttttttt   480
taagagttag aactaagact ctcacttcct cctgtgcctc cacattttttg accttcacat   540
tgggcccctg catcagaata cagcacccccc taacaggctc ctgttcagga ctctttctct   600
g   601

<210> 50
<211> 601
<212> DNA
<213> Homo sapien

<400> 50
aaatgaatta aggtagtgtt ttcactagca gcccaacatt tctttctctc ttagtagtgg   60
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ttatgcttcc ctttatgcag taaagtttcc atatttccat aaagaacaag aaaccaaata   180
atcctaatgg atatataatg aacacacaga tgaaaatttc acctgccatg cctttgaaaa   240
aagatcccta gctacttgta tttcatctta taattaaaat cagtcttttc acttatgttt   300
ycttcagatc tcctgttttg aagtgtatat agatatcaac atagaaatgc agcgtatatt   360
gctatcaact gcagtggagc agtgattcgt aggttttcca acatccttgc cttaagcaaa   420
cctgcaaaat caaagtgtga gctacgtcta aacaatggga gaggcttttt tttttttttt   480
aagagttaga actaagactc tcacttcctc ctgtgcctcc acattttttga ccttcacatt   540
gggcccctgc atcagaatac agcacccect aacaggctcc tgttcaggac tctttctctg   600
g   601

<210> 51
<211> 601
<212> DNA
<213> Homo sapien

<400> 51
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gacttgtgtc agtaaagaaa aaggcacata gctaagtgga agagcagatg aggcttggcg   120
ggaatcagcc agtggtctgc cctagcaaag gtaaacagaa ctgctggggg cttttggtcc   180
taggctcact actcagggag gcactttaac atggaatgac cagcaagttt ccttcctgat   240
cttttccacc accaccacaa gcctagtacc tccctccctc tttgctctgt tgctctcttc   300
rggaatgcac tggaaaccac cttcagttct gtttggaatt ttcctattcc ttattcagaa   360
agaggaagaa gcttttgcat ttactccaac cgttctacct attattccca taaactttct   420
gtgatctcat atcattaggc caaatgttaa tctttctggg agccaggaga ctgctttcac   480
attcagaggc cctggacata taggactgcc tctaactcac tctaactcag cttattgact   540
tgaatgcacc tttttaacaa gtgactaaaa aacaaactgt gactattctc tgaaaatgag   600
c   601

<210> 52
<211> 601
<212> DNA
<213> Homo sapien

<400> 52
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ggggcttttg gtcctaggct cactactcag ggaggcactt taacatggaa tgaccagcaa   120
gtttccttcc tgatcttttc caccaccacc acaagcctag tacctccctc cctctttgct   180
ctgttgctct cttcgggaat gcactggaaa ccaccttcag ttctgtttgg aattttccta   240
ttccttattc agaaagagga agaagctttt gcattactc caaccgttct acctattatt   300
sccataaact ttctgtgatc tcatatcatt aggccaaatg ttaatctttc tgggagccag   360
gagactgctt tcacattcag aggccctgga catataggac tgcctctaac tcactctaac   420
tcagcttatt gacttgaatg caccttttta acaagtgact aaaaaacaaa ctgtgactat   480
tctctgaaaa tgagcctata tctcatactt atttattctg tttaacactg tgaaacaaat   540
taagtcctct ggcactatgt atataccata aaaagcttat ttgtaagcct actaattgga   600
c   601

<210> 53
<211> 601
<212> DNA

30

<213> Homo sapien

<400> 53
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ttcagttctg tttggaattt tcctattcct tattcagaaa gaggaagaag cttttgcatt     120
tactccaacc gttctaccta ttattcccat aaactttctg tgatctcata tcattaggcc     180
aaatgttaat cttttctggga gccaggagac tgctttcaca ttcagaggcc ctggacatat     240
aggactgcct ctaactcact ctaactcagc ttattgactt gaatgcacct ttttaacaag     300
ygactaaaaa acaaactgtg actattctct gaaaatgagc ctatatctca tacttattta     360
ttctgtttaa cactgtgaaa caaattaagt cctctggcac tatgtatata ccataaaaag     420
cttatttgta agcctactaa ttggaccagt tttgacaata ttgaataagc actaattgca     480
gatcataatg tagaattata ggctgctgag gaaaacaata tcacaccatt tgctttcctc     540
agtttccttt tcagaatgag tttcataatg ttcactaatc caattttaa aatcctttac      600
a                                                                    601
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<210> 54
<211> 601
<212> DNA
<213> Homo sapien

<400> 54
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gcctctaact cactctaact cagcttattg acttgaatgc accttttaa caagtgacta      180
aaaaacaaac tgtgactatt ctctgaaaat gagcctatat ctcatactta tttattctgt     240
ctaacactgt gaaacaaatt aagtcctctg gcactatgta tataccataa aagcttact      300
ygtaagccta ctaattggac cagttttgac aatattgaat aagcactaat tgcagatcat     360
aatgtagaat tataggctgc tgaggaaaac aatatcacac catttgcttt cctcagtttc     420
cttttcagaa tgagtttcat aatgttcact aatccaattt ttaaaatcct ttacaaagtt     480
attcttaaac tatttccaga gactatctgg tttgtcattc tagaaatgaa attgcctttt     540
cagcctaaac agatggcctt aatttttggt ggagtggtat gaaaggaatg tcacatgaga     600
a                                                                    601
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<210> 55
<211> 601
<212> DNA
<213> Homo sapien

<400> 55
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cgcctactta tttcagctgc taaaatagggg ctgaaatctg tcaaggatcc tgaagggaag     120
gataagattc ctactattca atttaattta agcttttatt cagtgcctgc tgtgtgcaca     180
acactaagct agaaagtctg aggaatgttt agattattag gtcctgttcc ttgcctttca     240
tagatttaca atctattgat agggagagct aaaaaggaga gaaagaggaa ggagcaaaca     300
yaaaaacgtc aaaattttaa aataccattt taaaatttta ttttaaaatg ttaaatacca     360
tgcaaaatta aggaaaacct agattcataa aaattccttt cacaatcttg tgtaaatcaa     420
ttcagtgctt gcccttaatg tctcatccag tctgatgaga catgtttgt gatcaacaag     480
ggttttacta tgtttcttaa ttatgtgtct tgcctgttat ctctttctga ccgagattat     540
ttttaacaat aaattctgaa aactaagaaa gtgaaagcat aaaatattgt cttataaaat     600
a                                                                    601
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<210> 56
<211> 601
<212> DNA
<213> Homo sapien

<400> 56
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gcaaaattaa ggaaaaccta gattcataaa aattcctttc acaatcttgt gtaaatcaat     120
tcagtgcttg cccttaatgt ctcatccagt ctgatgagac atgttttgtg atcaacaagg     180
gttttactat gtttcttaat tatgtgtctt gcctgttatc tctttctgac cgagattatt     240
tttaacaata aattctgaaa actaagaaag tgaaagcata aaatattgtc ttataaaata     300
sgccaaggaa aaaatgacac tccatttcaa atatcaaaag ttagcatcaa gactgcacaa     360
gatgaatgta cagtcatgtg ttgcttacaa atgtggacat attctgagaa atgcatcttt     420
aggcaatttt gtcattgtgc aaacaccata gattgtactt gcagcctaat tggtggagcc     480
tactatacac taaggctata tggcatagcc tagtactcct aggctacaaa cctgtacagc     540
atgttactgt actgaatagt ggaggtacct gtaacataat ggtaagtatt tgtgtctcca     600
a                                                                      601


<210> 57
<211> 601
<212> DNA
<213> Homo sapien


<400> 57
agtactccta ggctacaaac ctgtacagca tgttactgta ctgaatagtg gaggtacctg      60
taacataatg gtaagtattt gtgtctccaa acgtagaaaa gctactgtaa aaatacagta     120
ttacaacctt agggtatcac tgtcttatat gtggtctgtt gttgaccgaa atgactatgc     180
ttaataccac tgaactgtac acttaaaaat ggttaagatg gtaaattcta tgttatgtat     240
gttttataat aataaaaaaa ttgaaaaaag catcaacatc tttctggga aaaaagaaaa      300
rgaaagaaaa tgcattagag tgatgagaat atttgaagta atagataaag tcaaaaacaa     360
agaaatgatc ttgcctttga actttcttgt ttaagattcg tacatcagtg atcacactgt     420
tattttccaa acgaccctttc agctggatac gacattttct gattgcagct gtgcttattg     480
cacttaataa tgttctggtc atccttgtgc caactataaa atacatcttc ggattcatag     540
gtgagtttca gaaaggcttc aatttggtca acccaaactc acgcctcatt aaatgatgga     600
c                                                                      601


<210> 58
<211> 601
<212> DNA
<213> Homo sapien


<400> 58
ggtttatttta aagtgtgtgc tggcatctcc tttgctagga actgctgggt aagacattga      60
ccttgccctg tgtttgtctt ctcaggggct tcttctgcca ctatgctgat ttttattctt     120
ccagcagttt tttatcttaa acttgtcaag aaagaaactt ttaggtcacc ccaaaaggtc     180
ggggtaagta aaccttgcaa tttcccccat tattagttgt tcttccaact acttagaata     240
aactagaaaa tacacatagt tcagaaaaat gaatcaatgt acaagaacca aaaatcaaaa     300
mtgggctaga actttctggt agcagagaaa ggggacatat ttctgaaact caaatgattc     360
tacttcaaat atcaaatatc ctgtgttgag tctgtcatac atgtcaaata gtagtagcct     420
ttcccacaga cacatatgct tcaggcaaat agcagtgtcc aataccaagc tgctgttgtg     480
ctatccgtgg aaaatcatgc aagaaggaat taggctccct agcggtgtta tggaataatt     540
taaatatttt ggtcatggtt gttaggtttg caaagccaaa ggaaagatgt tgctttt gtt     600
t                                                                      601


<210> 59
<211> 601
<212> DNA
<213> Homo sapien


<400> 59
cttttatggt tagtttgaaa gaatccattg aagatagaaa atgagagaat agaagaaacc      60
tgagaatagt aaaataaaga gcagagaaaa tatgggggca gggaaaacat gtgagtgcta     120
aggattgatt atgaatgaac gattagggg attgatggat cacagggtaa gtatatgctt     180
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32

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aactttataa gaaacttcca catagttttc cacagtgttt ctaccatttt catttccacc      240
cgtactacct acaacttcca ctgactccac agccctgcca acatttggtg ttgtcttttg      300
yattttagcc tttctagtgg gtctgaaatg gtaactcatt gtgattttca tttctgcttc      360
tgtgacaact aatgttgaaa acttttcaag tgtttaatgg tcactcatat atcttctttt      420
gtgaagtgtg tattcaaatc tttttgcccat ttttaaaatt taggttatgt gtttttattg      480
ggtatttgta gaagctcttt aaatatggat ccatgtccag attgccaata tattttccca      540
gtctatggta tggttgctta ttttcctaaa ggtgtcttaa ttacatcttt ctggggccag      600
g                                                                      601

<210> 60
<211> 445
<212> DNA
<213> Homo sapien

<400> 60
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catatatctt cttttgtgaa gtgtgtattc aaatcttttg cccattttta aaatttaggt      120
tatgtgtttt tattgggtat ttgtagaagc tctttaaata tggatccatg tccagattgc      180
caatatattt tcccagtcta tggtatggtt gcttattttc ctaaaggtgt cttaattaca      240
tctttctggg gccaggtcac catagctcaa agttttgcaa tttatgtctt aatgagataa      300
wattaatcag agtggtatag tcaaaattaa atgttttgat gtcctgggcc catataggta      360
ggactggatc atctaaccaa gatgcaaaaa aaaaaaaaca aaaaaacaaa aatagtactt      420
ggaaaaactt attttaaatt aaaca                                            445
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